

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 03/25/2026
Completed By: National TAB

PROJECT

03-30-26 Culvers - Wausau, WI (Revive)

225577 Lilac Avenue,

Wausau, WI 54401

Client

C.T. Gray Inc.

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

Table Of Contents

Section	Page #
Summary Data	3
Issue Data	4
Balance Schedule	7
Checklist	8
AHU/RTU	20
FAN - Exhaust	24
Kitchen Hood Type I	34
Kitchen Hood Type II	38
GRD Layout	40



National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)
Function: Test, Adjust, & Balance

Project Summary

The purpose of this visit was to evaluate the store's HVAC system for performance and efficiency and make any possible recommendations or improvements to the space. Reports of negative pressure were described upon arrival, stating there are instances of cold air rushing in and doors being hard to open.

It was first discovered that the unit serving the dining room was set to fan auto. When the exhaust hoods are on and pulling lots of air out of the building, it is recommended to have both units set to fan on to ensure there is air coming in to make up for the exhaust hoods. The scheduling in the thermostats has been changed to allow this.

PRV-3, serving the fryers, was also found to be operating over 50% higher than its design. This was also contributing to the negative pressure issue by pulling too much air out of the building. PRV-3's fan speed was lowered to improve conditions, and a smoke capture test was performed to confirm the hood will still capture smoke effectively.

To further improve the negative air issue, the units outside air was measured and appropriately adjusted for better performance. With all these adjustments made, the buildings pressure was increased from -0.0034 " W.C. to 0.0099 " W.C., and now the store is operating at a more comfortable positive pressure.

Issue List

- Dirty Exhaust Grilles
- Incorrect Humidity Wiring



03-30-26 Culvers - Wausau, WI (Revive)

Project Issue Information

Issue Name : Dirty Exhaust Grilles
Description : Exhaust grilles in the men's and women's bathroom as well as the mop bucket area have slight build up. Cleaning is recommended, may be a cause for restriction in the future if left unattended.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 03/31/2026 - Luke Gustafson - National TAB

Project Issue File Details



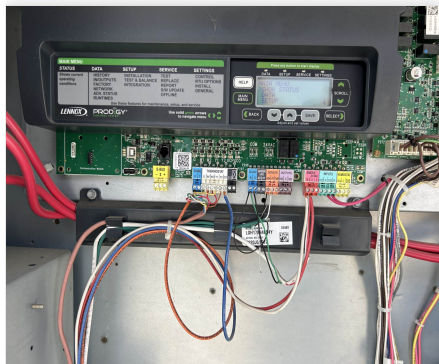


03-30-26 Culvers - Wausau, WI (Revive)

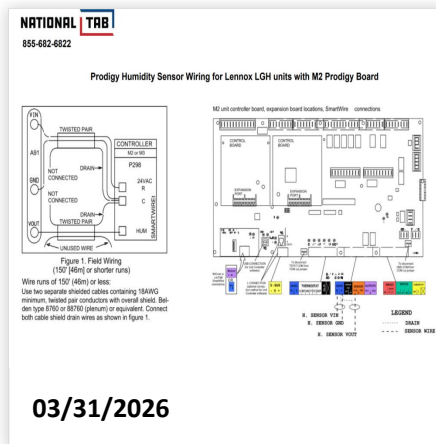
Project Issue Information

Issue Name : Incorrect Humidity Wiring
Description : Humidity wiring appears wired wrong on both RTUs, see included diagram for proper wiring.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : High **Asset Tag :**
Originated Date : 03/31/2026 - Luke Gustafson - National TAB

Project Issue File Details



03/31/2026



03/31/2026

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	6150	5865	4200	3887	1950	1978	31.7%	33.7%						
RTU-2	KITCHEN	6075	5578	4175	3666	1900	1912	31.3%	34.3%						
PRV-1	RESTROOM													375	342
PRV-2	KITCHEN HD											1500	1538		
PRV-3	KITCHEN HD											1500	1612		
PRV-4	DISHWASHER											350	377		
EF-1	MOP ROOM													75	73
TOTALS		12225	11443	8375	7553	3850	3890			0	0	3350	3527	450	415

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3850	3890
TOTAL EXHAUST	3800	3942
NET AIRFLOW	50	-52

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H ₂ O)
FRONT	0.0083
SIDE	0.0191
REAR	0.0022
AVERAGE	0.0099

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ❌

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ❌

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✅

NOTES:

SINCE DISHWASHER HOOD IS ONLY ON WHEN DISHWASHER IS RUNNING, IT WAS NOT INCLUDED IN THE OUTSIDE AIR CALCULATION. DUE TO THIS THE NET AIRFLOW AND FINAL CHECKS APPEAR NEGATIVE BUT ARE WITHIN DESIGN.

CheckList List

- STEP 1: INITIAL READINGS
- STEP 2: INITIAL WALKTHROUGH
- STEP 3: UNIT DATA AND EVAL
- STEP 4: TEST, ADJUST AND BALANCE
- STEP 5: FINAL TESTS



03-30-26 Culvers - Wausau, WI (Revive)

CheckList Information

Name : STEP 1: INITIAL READINGS **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 03/24/2026 - Trinity Dodds - National TAB
Completed Date : 03/30/2026 - Luke Gustafson - National TAB

CheckList Item Details

INITIAL BUILDING REVIEW:

What is the initial building pressure before making any changes?

Comment:

-0.0034"

Are thermostats programmed?

Yes

Comment:

Are building pressure relief working properly?

Comment:

YES

INITIAL AIRFLOWS:

SUPPLY RTU-1

Comment:

5865

OA RTU-1

Comment:

981

SUPPLY RTU-2

Comment:

5578

OA RTU-2

Comment:

3656

SUPPLY RTU-3

Comment:

NA

OA RTU-3

Comment:

NA

EF-1

Comment:

RESTROOM, 342

EF-2

Comment:

HD1, 1550

EF-3

Comment:

HD2, 2358

EF-4

Comment:

HD3, 377

MAU-1

Comment:

NA

Notes/Comments :

Dining RTU was programmed to auto for the fan. This was likely a significant contribution to negative pressure issues. This setting was changed to fan on as we want supply air coming in the building if the hoods are exhausting.

Date :03/30/2026



03-30-26 Culvers - Wausau, WI (Revive)

CheckList Information

Name : STEP 2: INITIAL WALKTHROUGH **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 03/24/2026 - Trinity Dodds - National TAB

Completed Date : 03/30/2026 - Luke Gustafson - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design? Yes

Comment:

All hood filters installed and accounted for? Yes

Comment:

Hoods are wired and have power? Yes

Comment:

Hood is free of alarms? Yes

Comment:

Thermostats have power? Yes

Comment:

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

YES



03-30-26 Culvers - Wausau, WI (Revive)

CheckList Information

Name : STEP 3: UNIT DATA AND EVAL **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 03/24/2026 - Trinity Dodds - National TAB

Completed Date : 03/31/2026 - Luke Gustafson - National TAB

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional? Yes

Comment:

DCV Max damper opening position is set to minimum? Yes

Comment:

Free cooling enthalpy set point set for lowest setting (Typically "D") Yes

Comment:

Motors are all operating below the FLA rating? Yes

Comment:

Are belts tight?

Comment:

YES

If direct drive unit is the speed controller working.

Comment:

N/A

Is gas piping installed and valves turned on?

Yes

Comment:

Unit free of noticeable noise and vibration

Yes

Comment:

EF's

Rotation is correct?

Yes

Comment:

Belts are tight?

Comment:

YES

Grease cup installed on hood fan?

Comment:

Hinge kit installed installed on hood fan?

Yes

Comment:

Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Yes

Comment:

Flex conduit is long enough so that fan can be completely tilted back?

Yes

Comment:

There is no major leakage around base of fan?

Yes

Comment:

Is the motor operating below the motor FLA rating?

Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open? Yes

Comment:

Unit free of noticeable noise and vibration? Yes

Comment:

MUA

Rotation is correct? N/A

Comment:

Gas piping is installed and valves are in on position? N/A

Comment:

Heater tested and is functional? N/A

Comment:

Internal motorized damper is fully opening? N/A

Comment:

Motor is operating below the FLA rating? N/A

Comment:

Unit free of noticeable noise and vibration? N/A

Comment:

HOODS

Kitchen equipment installed in proper places? Yes

Comment:

Can kitchen equipment be turned on for final smoke test? Yes

Comment:

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Yes

Comment:



03-30-26 Culvers - Wausau, WI (Revive)

CheckList Information

Name : STEP 4: TEST, ADJUST AND BALANCE **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 03/24/2026 - Trinity Dodds - National TAB

Completed Date : 03/31/2026 - Luke Gustafson - National TAB

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting? Yes

Comment:

Is space comfortable in all areas? Yes

Comment:

Is the space free of ventilation noise? Yes

Comment:

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

NA



03-30-26 Culvers - Wausau, WI (Revive)

CheckList Information

Name : STEP 5: FINAL TESTS **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 03/24/2026 - Trinity Dodds - National TAB

Completed Date : 03/31/2026 - Luke Gustafson - National TAB

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

FRYER, GRILL

List smoke candle type used

Comment:

45 SECOND

Smoke test capture - Perimeter of hood

Comment:

100

Smoke test capture - Top of cooking surface

Comment:

100

WITNESS

Date test was completed

03/31/2026

Comment:

TAB tech name / Firm

Comment:

NTI / LUKE GUSTAFSON

Site super name / Firm

Comment:

Owner representative name / Firm (if Applicable)

Comment:

LIZ MOENS

Building pressure at front & back doors (All Systems On)

Comment:

0.0099" AVG

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

YES

Thermostats are programmed?

Yes

Comment:

DINING THERMOSTAT WAS ORIGINALLY IN FAN AUTO; IT HAS BEEN CHANGED TO FAN ON AND SHOULD REMAIN THERE IF EXHAUST HOODS ARE RUNNING.

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:DINING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5620J04625
Model Num	NA	LGH180H4BS4Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24X16
Num Final Filter 1	-	6
Final Filter Size 1	-	23.375X23.375X1.75

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56HZ
Horsepower	-	3.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	9.4

Drive Data		Actual
Motor Sheave Size		3.75"
Motor Bore Size		1"
Fan Sheave Size		7"
Fan Sheave Bore		1.25"
Belt CL Distance		20.5"
Num of Belts		1
Belt Size		B55
Belt Alignment		CORRECT

Test Data		
	Design	Actual
SF CFM	-	5865
SF RPM	-	730
RA CFM	-	3849
OA CFM	-	2016
RL Voltage	-	212.6/213.3/212.7
RL Amperage	-	7.9/7.2/7.9
SF Rotation	-	CORRECT
SF System SetPt	-	HIGH SPEED
RA Damper Position	-	MECHANICALLY LINKED
Min OA Damper Position	-	MARKED
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10 MA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.512"
Fan Suction SP	-	-0.687"
Fan Discharge SP	-	0.320"
Total ESP	-	0.832"
Fan Total SP	-	1.007"

General		Actual
Fan Rotation Correct		YES
Unit Filters Clean		YES
Condensate Drain Installed		YES

Completed By: Luke Gustafson on 03/31/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: AHU/RTU



Asset: RTU-2

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5620J04627
Model Num	NA	LGH180H4BS4Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24X16
Num Final Filter 1	-	6
Final Filter Size 1	-	23.375X23.375X1.75

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56HZ
Horsepower	-	3.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	9

Drive Data	
	Actual
Motor Sheave Size	3.75"
Motor Bore Size	1"
Fan Sheave Size	7"
Fan Sheave Bore	1.25"
Belt CL Distance	20.5"
Num of Belts	1
Belt Size	B55
Belt Alignment	CORRECT

Test Data		
	Design	Actual
SF CFM	-	5578
SF RPM	-	784
RA CFM	-	3650
OA CFM	-	1928
RL Voltage	-	213.0/212./213.2
RL Amperage	-	7.6/7.7/8.1
SF Rotation	-	CORRECT
SF System SetPt	-	HIGH SPEED
RA Damper Position	-	MECHANICALL Y LINKED
Min OA Damper Position	-	MARKED
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10 MA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.510"
Fan Suction SP	-	-0.753"
Fan Discharge SP	-	0.262
Total ESP	-	0.772"
Fan Total SP	-	1.015"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: FAN - Exhaust



Asset: EF-1

AREA:MOP ROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	NOT LEGIBLE
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	75	73

Completed By: Luke Gustafson on 03/31/2026

Notes:

[1] Due to fans location in ceiling, the motor data was not accessible. Measured CFM was in design, and an adjustment was not required.

Written By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/31/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: FAN - Exhaust



Asset: PRV-1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-090-D	XRED-095-D
Serial Num	-	17126047
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MCMILLAN ELECTRIC
Frame	-	NL
Horsepower	0.0667	1/8
Motor Rpm	1550	1550
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.6
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	375	342
Fan Rotation	-	CORRECT
Motor RPM	-	1550
RL Voltage	-	NA
RL Amperage	-	1.14
Total ESP	0.50"	0.295"
Fan Inlet SP	-	-0.295"
Fan Discharge SP	-	ATM

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: FAN - Exhaust



Asset: PRV-2

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-161XP-15	XRUB-161XP-15-G
Serial Num	-	17126049
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	56H
Horsepower	1.5	1.5
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208-230
Amperage (rated)	-	5.4
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1500	1612
Fan RPM	-	1582
Fan Rotation	-	CORRECT
Motor RPM	-	1744
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.581"
Discharge ESP	-	ATM
Total ESP	2.337"	0.581"

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/31/2026



03/31/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: FAN - Exhaust



Asset: PRV-3

AREA:FRYER

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-141-7	XRUB-141-7-G
Serial Num	-	17126050
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56H
Horsepower	0.75	1.5
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	4.2
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave SetPt	5 TURNS OUT

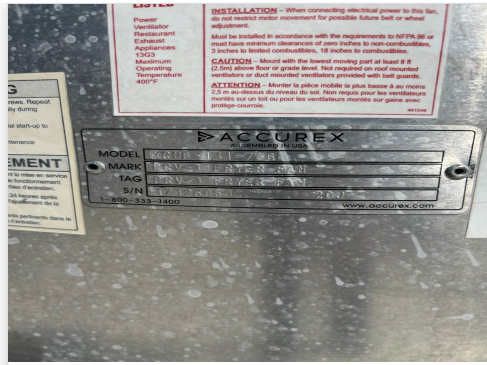
Test Data		
	Design	Actual
CFM	1500	1538
Fan RPM	-	1115
Fan Rotation	-	CORRECT
Motor RPM	-	1776
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.322"
Discharge ESP	-	ATM
Total ESP	1.00"	0.322"

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: FAN - Exhaust



Asset: PRV-4

AREA: DISHWASHER

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-090-D	XRED-095-D
Serial Num	-	17126047
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MCMILLAN
Frame	-	NL
Horsepower	0.0667	1/8
Motor Rpm	900	1550
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.6
Service Factor	-	NL

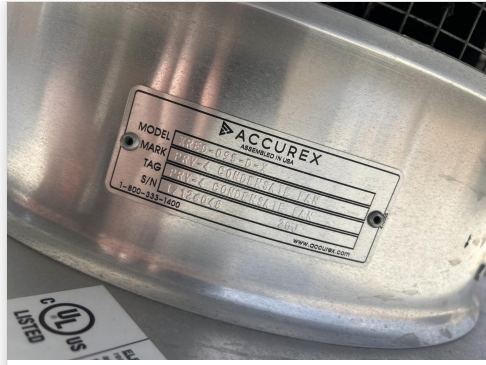
Test Data		
	Design	Actual
CFM	350	377
Fan Rotation	-	CORRECT
System SetPt	-	HIGH SPEED
RL Voltage	-	NA
RL Amperage	-	1.18
Total ESP	0.50"	0.201"
Fan Inlet SP	-	-0.201"
Fan Discharge SP	-	ATM

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: Kitchen Hood Type I



Asset: HD-1

AREA:GRIDDLE HOOD

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XGEP-5.33S	XGEP-5.33S
Job / Serial Num	-	NOT LEGIBLE
Type	LOW PROX	LOW PROX
Hood length	64"	64"
Hood Width	23"	26"

Test Data Exhaust		
	Design	Actual
Filter Type	GREASE GRABBER	GREASE GRABBER
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.78	1.78
Filter Total AK Area	7.12	7.12
Filter1 FPM	-	257
Filter2 FPM	-	201
Filter3 FPM	-	204
Filter4 FPM	-	202
Filter Ave FPM(corr)	-	216
CFM	1500	1538

Cooking Equipment	
	Actual
Item 1	GRIDDLE

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: Kitchen Hood Type I



Asset: HD-2

AREA:FRYER HOOD

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XXEP-FB-6.92-S	XXEP-FB-6.92-S
Job / Serial Num	-	NOT LEGIBLE
Type	LOW PROX	LOW PROX
Hood length	83"	83"
Hood Width	23"	26"

Test Data Exhaust		
	Design	Actual
Filter Type	X-TRACTOR	X-TRACTOR
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.78	1.78
Filter Total AK Area	8.9	8.9
Filter1 FPM	-	192
Filter2 FPM	-	195
Filter3 FPM	-	151
Filter4 FPM	-	175
Filter5 FPM	-	197
Filter Ave FPM(corr)	-	182
CFM	1500	1612

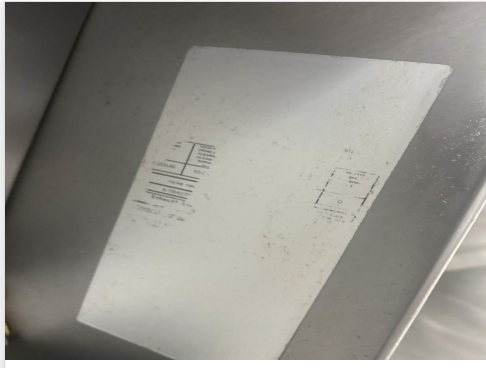
Cooking Equipment	
	Actual
Item 1	FRYERS

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

National TAB

Project: 03-30-26 Culvers - Wausau, WI (Revive)

System/Unit: Kitchen Hood Type II



Asset: HD-3

AREA:DISHWASHER

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XD3-3.5-S	XD3-42.00-S
Serial Num	-	17123753
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	Actual
Exhaust CFM	350	377

Completed By: Luke Gustafson on 03/31/2026

Unit Data - PHOTO LOG



03/30/2026



03/30/2026

4. VERIFY ALL OFFUSE AND RETURN VALVE COLORS WITH OWNER AND ARCHITECT.

